NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Browns Ferry Unit 1	0 5 0 0 0 2 5 9	1 OF 0 3

TITLE (4) Control Room Emergency Ventilation System Flow Out Of Specification Due To Procedural Inadequacy

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES	DOCKET NUMBER(S)
									Browns Ferry Unit 2	0 5 0 0 0 2 6 0
0 7 0 8	8 7	8 7	—	0 1 4	— 0 1	0 1	0 8	8 8	Browns Ferry Unit 3	0 5 0 0 0 2 9 6

OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
	N	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10)	0 0 0	20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
		20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
		20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
	AREA CODE
Alan W. Gordon, Engineer, Plant Operations Review Staff	2 0 5 — 7 2 9 - 2 5 3 7

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On July 8, 1987 at 1430, engineers testing the control room emergency ventilation (CREV) system measured flow rates in excess of the design basis flow rate. The test, performed for the first time under simulated accident conditions, revealed that the throttle dampers on the two CREV units had not been set to deliver the flow, required by technical specifications for optimum filtration. This condition has likely existed since the system was installed during plant construction. Upon discovery of the deficiency, the damper positions were adjusted to provide flows within proper limits.

The special procedure was prompted following recognized differences between the procedural methodology for testing CREV and CREV auto initiation from accident logic. Supply fans were routinely tripped for performance of the flow test. The test procedure also specified a different damper lineup. The CREV flow test procedure will be revised. Administrative controls needed to maintain proper system alignment will be prescribed, as appropriate, when testing is complete. In addition, the restart test program will verify the ability of the CREV system to perform its function.

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

Units 1, 2, and 3 were in refueling outages and completely defueled when the condition described below was discovered.

On July 8, 1987 at 1430, while testing the control room emergency ventilation (CREV) (EIIS code VI) units A and B, engineers measured flow rates in excess of the design basis flow rate. The testing, carried out for the first time under simulated accident conditions, recorded flows of 728 and 680 cfm on CREV units A and B respectively. The acceptable flow rate is 500 ± 50 cfm. The throttle dampers on the two CREV units had not been set to deliver the flow required by technical specification 3.7.E.2.c for optimum filtration possibly since their installation. Upon completion of the test, the damper positions were adjusted to provide flows within tolerance by 1530.

The testing and damper adjustments were performed under a maintenance request to set CREV flow prior to fuel pool activities. No operator actions were required as a result of the finding. The new test methodology was prompted following recognized differences between plant procedures for CREV system testing and CREV initiation from accident logic. The shutdown board room fans, which supply the fresh air plenum from which the CREV units draw, were routinely tripped prior to performing the flow test. Under accident conditions the fans remain running. The test procedure also did not specify closure of the isolation dampers to the control room and relay room air handling units, which occurs upon CREV auto start. These differences were noted in the course of a system review undertaken by plant engineers. The reason for the test procedural deficiency cannot be positively established.

A special test has been written and approved which will give results for use in correcting the existing test procedure. The flow will be checked using various damper alignments. This will ensure a correct postaccident ventilation fan and damper alignment for optimum system performance. Administrative controls needed to maintain proper alignment will be prescribed, as appropriate, when testing is complete. The restart test program will also verify the ability of the CREV system to pressurize the control room prior to restart.

The CREV system is designed to provide a safe atmosphere for control room personnel in the event of an accident resulting in a ground level radioactive release. The two fan/filter units are 100 percent redundant and service the control rooms for all three units. With the CREV system delivering excessive flow, filtration efficiency of iodine and particulates would have been diminished if required to filter contaminants during an accident. However, using the worst case (728 cfm) flow and accident dose rates for which the CREV system has been analyzed, calculations show that the reduced filtration efficiency would result in exposures to control room personnel well below 10 CFR 50 Appendix A (General Design Criteria 19) limits over a 30-day postaccident period. The control room atmosphere is continuously monitored for airborne radiation and an alarm would alert plant personnel to initiate radiological surveys and various mitigative procedures.

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

Commitments - 1) The CREV test procedure will be revised to provide equipment lineups similar to that for auto initiation.

2) The restart test program will verify the ability of the CREV system to pressurize the control room prior to restart.

Related Events - BFRO 50-259/87006

TENNESSEE VALLEY AUTHORITY
Browns Ferry Nuclear Plant
Post Office Box 2000
Decatur, Alabama 35602

JAN 26 1988

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Dear Sir:

TENNESSEE VALLEY AUTHORITY - BROWNS FERRY NUCLEAR PLANT UNIT 1 - DOCKET NO. 50-259 - FACILITY OPERATING LICENSE DPR-33 - REPORTABLE OCCURRENCE REPORT BFRO-50-259/87014 R1

The enclosed report provides additional details concerning the control room emergency ventilation system flow out of specification due to procedural inadequacy. This report is submitted in accordance with 10 CFR 50.73 (a)(2)(i).

Very truly yours,

TENNESSEE VALLEY AUTHORITY

John Walker

J. G. Walker
Plant Manager
Browns Ferry Nuclear Plant

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NRC Resident Inspector, Browns Ferry Nuclear Plant

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